

**Differential diagnosis of COPD**

| Diagnosis  | Suggestive Features*  |
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| COPD   | Onset in mid-life; onset in early adulthood should prompt suspicion for alpha-1 antitrypsin deficiency<br>Symptoms slowly progressive<br>Long smoking history, although can occur in nonsmokers<br>Dyspnea during exercise<br>Largely irreversible airflow limitation |
| Asthma   | Onset early in life (often childhood)<br>Symptoms vary from day to day<br>Symptoms at night/early morning<br>Allergy, rhinitis, and/or eczema also present<br>Family history of asthma<br>Largely reversible airflow limitation                                       |
| Central airway obstruction (eg, bronchogenic or metastatic cancer, lymphadenopathy, scarring from endotracheal tube) | Monophonic wheeze or stridor<br>Variable inspiratory or fixed slowing on flow volume loop<br>Chest radiograph often normal<br>Airway narrowing on three dimensional reconstruction of HRCT scan   |
| Heart failure  | Fine basilar crackles on auscultation<br>Chest radiograph shows dilated heart, pulmonary edema<br>Pulmonary function tests typically indicate volume restriction, but airflow limitation can sometimes be seen  |
| Bronchiectasis   | Large volumes of purulent sputum<br>Commonly associated with recurrent or persistent bacterial infection<br>Coarse crackles on auscultation, clubbing of digits<br>Chest radiograph/HRCT shows bronchial dilation, bronchial wall thickening                          |
| Tuberculosis   | Onset all ages<br>Chest radiograph shows upper lung zone scarring and/or calcified granulomata<br>Positive PPD or IGRA<br>High local prevalence of tuberculosis   |
| Obliterative bronchiolitis   | Onset in younger age, nonsmokers<br>May have history of rheumatoid arthritis or fume exposure<br>HRCT on expiration shows hypodense areas, mosaic pattern   |
| Diffuse panbronchiolitis   | Most patients are male and nonsmokers<br>Highest prevalence in East Asia<br>Almost all have chronic sinusitis<br>Chest radiograph and HRCT show diffuse small centrilobular nodular opacities and hyperinflation  |

HRCT: high resolution computed tomography; PPD: purified protein derivative; IGRA: interferon gamma release assay.

\* These features tend to be characteristic of the respective diseases, but do not occur in every case. For example, a person who has never smoked may develop COPD (especially in the developing world, where other risk factors may be more important than cigarette smoking); asthma may develop in adult and even elderly patients.

*Adapted with permission from the Global Initiative for Chronic Obstructive Pulmonary Disease. Global strategy for the diagnosis, management, and prevention of chronic obstructive pulmonary disease: Revised 2011. Global Initiative for Chronic Obstructive Lung Disease (GOLD), [www.goldcopd.org](http://www.goldcopd.org) (Accessed on August 10, 2012).*

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